

### **ABSTRACT OF THE DISCLOSURE**

A method for deinterleaving a sequence of interleaved data stored in a set of memory locations from a first order to a second order in-place of a memory with linear time. Two data items are withdrawn from the center of the sequence, creating a hole therein. Destination positions for said withdrawn data items are determined. It is determined whether the destination positions contain any data items. If so, the data items of said destination positions are replaced with the withdrawn data items, and second destination positions are determined for the data items withdrawn from the first destination positions. Otherwise, the first data items are inserted at the destination positions directly. If a data item is inserted at the hole of the sequence before the sequence is properly deinterleaved, an incorrect positioned data item is determined and repositioned. The repositioning sequence is repeated until all data items are correctly positioned.